

Patent claims

1. A method for manufacturing a flexible strip (3) of at least two different masses (12, 13) flowable with the supply of heat, in particular of a biopolymer, wherein the masses in the flowable condition together are poured out from a strip casting device as a strip onto a cooling device (4) in a manner such that the two masses on the strip form a certain pattern, characterised in that at least a first mass (12) is poured out from a casting gap (15) and that at least a second mass (13) by way of at least one injection nozzle (21, 22) is led up to into a region within the casting gap and here is ejected into the casting flow of the first mass, in a manner such that the first mass completely or partly envelops the seconds mass.
2. A method according to claim 1, characterised in that the ejection of the second mass (13) is effected intermittently.
3. A method according to claim 1, characterised in that the injection nozzle (21, 22) is moved during the ejection of the second mass (13).
4. A method according to claim 3, characterised in that with respect to the longitudinal direction (L) of the casting gap (15) from several injection nozzles at least one second mass (13) is ejected, wherein the injection nozzles are moved in opposite directions in a manner such that the material flows of the second mass intersect.
5. A method according to claim 1, characterised in that with respect to the width (B) of the casting gap (15) from at least

two injection nozzles (21, 22) arranged next to one another at least one second mass (13) is ejected.

6. A method according to claim 1, as a constituent part of a capsule manufacturing method for manufacturing patterned soft capsules from two flexible strips (3, 3') with the rotary die method.
7. A device for manufacturing a flexible strip (3) of at least two different masses (12, 13) flowable with the addition of heat, in particular of a biopolymer, with a casting container (14) which comprises at least one casting gap (15) for pouring out at least one first mass (12) and with a feed device arranged within the casting container (14), for at least one second mass (13), wherein the two masses in the flowable condition may together be poured out onto a cooling device (4) in a manner such that they form a certain pattern on the strip, characterised in that the feed device for the second mass (13) is at least one injection nozzle (21, 22) whose opening opens out in a region within the casting gap (15) in a manner such that the casting gap completely or partly surrounds the opening.
8. A device according to claim 1, characterised in that the second mass (13) is intermittently ejectable out of an injection nozzle (21, 22) by way of a metering device (23).
9. A device according to claim 1, characterised in that the injection nozzle (21, 22) is movably mounted in the casting container (14).
10. A device according to claim 1, characterised in that with respect to the longitudinal direction (L) of the casting gap

(15) several injection nozzles are arranged next to one another in the casting container (14) which are movable simultaneously or individually.

11. A device according to claim 9, characterised in that with respect to the width (B) of the casting gap (15) at least two injection nozzles (21, 22) are arranged next to one another.
12. A device according to claim 9, characterised in that at least one injection nozzle or several injection nozzles (21, 22) are arranged at the ends of feed tubes (24) which are led through a side wall (17) of the casting container (14) and are linkedly mounted on this.
13. A device according to claim 12, characterised in that the supply tubes (24) are movable individually or in groups with a manipulator (20) arranged outside the casting container (14).
14. A device according to claim 10, with which with respect to the width of the casting gap there are arranged at least two injection nozzles, characterised in that at least two injection nozzles are movably arranged next to one another in a manner such that they may intersect with respect to the longitudinal axis (L) of the casting gap (15).
15. A device according to claim 7, characterised in that the opening of the injection nozzle is displaced back relative to the plane of the casting gap.
16. A device according to claim 7 as a constituent part of a capsule manufacturing machine (1) for manufacturing patterned

soft capsules from two flexible strips (3, 3') with the rotary die method.